

# FINDINGS OF NO SIGNIFICANT IMPACT and DECISION RECORD

## *PROGRAMMATIC ENVIRONMENTAL ASSESSMENT GEOTHERMAL LEASING AND EXPLORATION SHOSHONE-EUREKA PLANNING AREA*

EA# NV63-EA02-16

### INTRODUCTION

The Battle Mountain Field Office of the Bureau of Land Management has written a Programmatic Environmental Assessment for geothermal leasing and exploration within the Shoshone-Eureka Planning Area. The need for the new analysis is that the previous geothermal EAs, "*Regional Environmental Analysis on Geothermal Leasing in the Shoshone Resource Area*" and the "*Regional Environmental Analysis on Geothermal Leasing in the Eureka Resource Area*," did not contain analysis of cumulative impacts or of the following critical elements:

1. Current Threatened, Endangered, and Special Status Species,
2. Invasive Nonnative Species,
3. Cultural Resources,
4. Native American Religious Concerns.

The Programmatic EA is to be used as the primary environmental document for the leasing of geothermal resources and the subsequent exploration in the Shoshone-Eureka Planning Area. It also is needed to meet the National Environmental Policy Act (NEPA) requirements related to the Bureau of Land Management's (BLM) June 2001 National Energy Policy Implementation Plan, issued in response to the Bush Administration's National Energy-Policy and the President's Executive Order (EO) 13212, Actions to Expedite Energy-related Projects.

The Shoshone-Eureka Planning Area covers approximately 4.4 million acres in Lander, Eureka, and northern Nye Counties. Approximately 4.3 million acres are open to geothermal leasing. The EA states that the proposed action is subject to site-specific analysis and does not include development of geothermal resources. Any proposed surface disturbing activity must undergo a site-specific NEPA analysis before authorization can be granted.

The following alternatives were considered:

**The Proposed Action Alternative** is the leasing and subsequent exploration of BLM-administered geothermal resources in the Shoshone-Eureka Planning Area, under provisions in a programmatic geothermal EA, subject to site-specific analysis, as needed. The proposed action does not include development of geothermal resources, nor does it include actions on privately owned lands within the Shoshone-Eureka Planning Area.

**The No Action Alternative** is the continued leasing and exploration of geothermal resources, guided by the “*Regional Environmental Analysis on Geothermal Leasing in the Shoshone Resource Area*” and the “*Regional Environmental Analysis on Geothermal Leasing in the Eureka Resource Area.*” Due to the inadequacies of these EAs, individual EAs would have to be written for each lease application. There would be no change in the actual permitted action from that of the proposed action. This alternative has an adverse energy impact by not expediting the permitting process. Further, this alternative does not comply with the direction of the President (Executive Order 133212) and the recommendations of the National Energy Development Group (Appendix One, Page 10, Chapter 6, Recommendation 5).

The following alternatives were considered, but were eliminated from detailed analysis and subsequently not selected:

**Designating Geothermal Leasing and Exploration Areas:** One alternative would be to limit geothermal leasing and exploration, and therefore subsequent development, to specific locations within the Planning Area. Due to the lack of research, surveys, and inventories necessary to designate areas for geothermal leasing and exploration within the 4.3 million acres of the Planning Area, and because it is inconsistent with the Shoshone-Eureka Resource Area Management Plan this alternative was not selected.

**Limiting Geothermal Leasing and Exploration:** Another alternative would be to limit the number of geothermal leases granted in the Planning Areas and also limit exploration so as not to exceed a certain threshold. Due to the wide range of exploration options and the variability of impacts associated with such exploration, a threshold cannot be established on the Planning Area wide level. Site-specific NEPA analysis would be required to define such thresholds. Limiting the number of leases is inconsistent with the direction set forth in the Shoshone-Eureka Resource Area Management Plan. Therefore, limiting of geothermal leasing and exploration within Shoshone-Eureka Planning Area was not selected.

**Denial of Geothermal Leases:** The final alternative considered would be the denial of geothermal leasing in the Shoshone-Eureka Planning Area. This violates the current National Energy Policy, which supports a clean and diverse portfolio of domestic energy supplies in which geothermal energy would play a part and is inconsistent with the direction set forth in the Shoshone-Eureka Resource Area Management Plan, approved on February 26, 1986, when the Record of Decision was signed. Therefore, denial of all geothermal leasing within Shoshone-Eureka Planning Area, was not selected.

## **DECISION**

It is my decision to allow leasing and exploration as described in the proposed action alternative. Implementation of leasing and exploration will be through site-specific analysis as necessary.

The No Action Alternative was not selected because the proposed action alternative allows for the timely processing of geothermal lease applications while protecting resources.

The other alternatives were not selected due to one or more of the following:

1. Inconsistent with the Shoshone-Eureka Resource Management Plan
2. Inconsistent with the current National Energy Policy.
3. Lack of research, surveys, and inventories needed.

## Mitigation And Monitoring

The following mitigation and monitoring requirements for the proposed action were developed during the analysis:

Resource	Mitigation
Air Quality	The operator would be required to implement at the direction of the Assistant Field Manager testing of emissions for H <sub>2</sub> S and other noxious / deadly gases where there is indication that these gases may occur.
Cultural-Historical Resources	Cultural resources would be avoided and mitigation measures would be developed on a case-by-case basis as required by regulations, lease terms and attached stipulations developed during site specific NEPA analysis.
Native American Religious Concerns	As surface disturbing activities occur, the BLM would require that the operator monitor the water temperature and outflow of water from local hot springs and existing wells as directed by the Assistant Field Manager. If the temperature and outflow of the water from the spring or well were impacted to a degree determined by the Assistant Field Manager to be more than negligible, the BLM would require the operator to take corrective actions. Failure of the operator to take the corrective measures as directed could result in BLM's terminating the operation.
Special Status Species	<p>The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened, endangered, or other special status species. The special status species list is reviewed and / or updated annually and as species are added, new mitigations / stipulations may add further restrictions. BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid BLM-approved activity that will contribute to a need to list such a species or their habitat. BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species or result in the destruction or adverse modification of a designated or proposed critical habitat. BLM will not approve any ground-disturbing activity that may affect any such species or critical habitat until it completes its obligations under applicable requirements of the Endangered Species Act as amended, 16 U.S.C. § 1531 et seq., including completion of any required procedure for conference or consultation.</p> <p>Exploratory endeavors on the public lands would require a Special Status Species review, and may require a field survey for the presence of Special Status Species. Potential impacts to Special Status Species would be analyzed on a case-by-case basis. Mitigation measures would be developed on an individual project basis depending upon the results of the survey.</p> <p>Springs within ½ mile of exploration activities would be inventoried by BLM approved and supervised personnel for the presence of invertebrates. If a rare genus, such as Pyrgulopsis, is found, identification to species and monitoring of effects of the proposed action would be required and site-specific mitigation may be developed by the BLM.</p>

Resource	Mitigation
	<p>BLM could require measures listed below for activities in sage grouse and ferruginous hawk habitat.</p> <p>Sage grouse: Operations would avoid active leks (strutting grounds) by 2 miles during strutting season (see Management Guidelines for Sage Grouse and Sagebrush Ecosystems in Nevada, October 2000). Approximate dates: March 1 - May 15</p> <p>Operations would avoid nesting and brood rearing habitat (especially riparian habitat where broods concentrate beginning usually in June) by ½ mile during the time such areas are in use. Approximate dates: April 1 - August 15</p> <p>Operations would avoid sage grouse wintering habitat by ½ mile while occupied. Most known wintering grounds in the Shoshone-Eureka Resource Area occur at high elevations and are not likely to be affected. Avoidance dates would vary with severity of the winter.</p> <p>BLM would limit the disturbance to and fragmentation of all known sage grouse habitat.</p> <p>Ferruginous hawks: Operations would avoid active nests by ½ mile. Approximate dates: March 15 - July 1</p>
Hydrology and Water Quality and Quantity	<p>All applicants for exploration permits would be required to submit a surface water inventory to the Assistant Field Manager before authorization would be granted. The inventory would include a map of appropriate scale (such as 1:24,000) indicating the location of all surface water on public land within ½ mile radius from the surface-disturbing activity.</p> <p>At the commencement of surface disturbing activities for the drilling of exploration wells, the BLM would require that the drilling company monitor the water temperature and / or outflow of water from local springs and existing wells as directed by the Assistant Field Manager. If the temperature and outflow of the water from the spring or well were impacted to a degree determined by the Assistant Field Manager to be more than negligible, the BLM would require the operator to take corrective actions. Failure of the operator to take the corrective measures as directed could result in BLM's terminating the operation.</p> <p>Results would be reported to Federal and State agencies on the status of these hydrologic systems during drilling.</p> <p>Impacts include, but are not limited to, the following: Change in water temperature Change in discharge rate Substantial decrease in water table level Surface subsidence In the event of impacts to surface or subsurface waters, determined by the Assistant Field Manager to be more than negligible, or if a violation of Federal or State water quality standards occurs, the</p>

Resource	Mitigation
	<p>Assistant Field Manager would assess the situation, and may require the operator to amend, relocate or discontinue operations. If operations were terminated, the BLM would develop and the operator would implement remediation measures.</p> <p>Typical measures include:  No use of the surface water;  Limitations on the type of equipment that may be used; and  Restrictions of activities during certain times of the year.</p>
Wetlands / Riparian Zones	<p>Surface waters, wetlands and riparian areas would be avoided as much as possible. No exploration activities should occur within 100 feet of riparian areas.</p> <p>The NOTICE OF INTENT TO CONDUCT GEOTHERMAL RESOURCE EXPLORATION OPERATIONS (Form 3200-9), terms and conditions, number 10 states that “Vegetation shall not be disturbed within 300 feet of waters designated by the Authorized Officer, except at approved stream crossing.”</p> <p>Where surface waters, wetlands and riparian areas cannot be avoided (100 feet for non-surface disturbing exploration activities and 300 feet for surface disturbing exploration activities), mitigation would be developed on a case-by-case basis.</p> <p>Typical measures include:  No use of the surface water;  Limitations on the type of equipment that may be used; and  Restrictions of activities during certain times of the year.</p> <p>The BLM would require that the drilling company monitor the temperature and outflow of water from local hot springs. If the temperature and / or outflow of water from a spring were impacted to a degree determined by the Assistant Field Manager to be more than negligible, the BLM would require the operator to take corrective action. Failure of the operator to take the corrective measures as directed could result in BLM's terminating the operation.</p>
Invasive Nonnative Species	<p>Areas to be involved in surface disturbing activities would be inventoried for the presence of invasive, nonnative species and treated if present.</p> <p>The exterior of all vehicles and heavy equipment would be cleaned by water before entering public lands to do work. To minimize the possibility for contamination, a designated wash area would be designated by the BLM and would be established and monitored by the operator in high use areas.</p> <p>The boots of operators and other persons working in the areas would be cleaned of seed before coming onto BLM lands.</p> <p>The BLM would develop and the operator would implement a weed treatment program from the time operation commences until the site is abandoned.</p> <p>Seed and mulch used to reclaim disturbed areas would be free of</p>

Resource	Mitigation
	<p>invasive nonnative species.</p> <p>Operator and workers would driving through or parking in areas where invasive nonnative species occur.</p> <p>When sites are abandoned, they would be inventoried for the presence of invasive nonnative species and treated if present.</p>
Land Use Authorizations	Avoid existing rights-of-way where possible. Proposed leases would not be allowed to overlap existing land use authorizations if they would adversely affect the valid existing authorization.
Allotment Management	<p>If operations cause a water source to become unavailable to livestock, the Authorized Officer may require a new well to be drilled, or another water development to be constructed in the general area to provide adequate water for livestock.</p> <p>If the lease area is within a grazing allotment, the Assistant Field Manager may require additional measures, including seasonal restrictions or no surface occupancy.</p>
Recreation	None identified.
Soils	None identified.
Vegetation	<p>Disturbed areas would be reseeded with native or introduced plant species, depending on the site conditions. Disturbed areas would be reseeded with pure live seed (certified weed free) with the mixes in Appendix F.</p> <p>Native vegetation would be used wherever possible.</p> <p>However, to compete with invasive nonnative species, introduced species, as suggested in the seed list in Appendix F, would be used.</p>
Visual Resources	None identified.
Migratory Birds	<p>The BLM would limit the amount of ground clearing or other disturbance (such as the creation of cross-country access to drill sites) that an operator may do during the migratory bird nesting season.</p> <p>Areas to be disturbed would be surveyed, by personnel approved and supervised by the BLM to determine the existence and location of any nests. If any nests were located, the nest would be avoided by ¼ mile.</p> <p>If the nest area cannot be avoided, mitigation would be developed on a case-by-case basis.</p>
Wildlife	<p>If operations cause a water source to become unavailable to wildlife, the Authorized Officer may require a new well to be drilled, or another water development to be constructed in the general area to provide adequate water for wildlife.</p> <p>If the lease area is within a wildlife management area, the Assistant Field Manager may require additional measures, including seasonal restrictions or no surface occupancy.</p>
Wild Horses and Burros	<p>If operations cause a water source to become unavailable to wild horses, the Authorized Officer may require a new well to be drilled, or another water development to be constructed in the general area to provide adequate water for the wild horses.</p> <p>If the lease area is within a HMA, the Assistant Field Manager may require additional measures for the protection of wild horses and burros, such as seasonal restrictions.</p>
All Resources	Operators would adhere to all Standard Operating Procedures as

Resource	Mitigation
	outlined in this EA, unless specifically waived by the Assistant Field Manager.
Playa	Because playas are important recreational places, apt to have cultural sites nearby and provide critical habitat for some migratory waterbirds and shorebirds, including Special Status Species such as the Snowy Plover, mitigation measures would be developed on a case-by-case basis. Mitigation may include no surface occupancy and seasonal restrictions.

## **RATIONALE FOR THE DECISION**

I base my decision on the analysis contained in the *Programmatic Environmental Assessment Geothermal Leasing and Exploration Shoshone-Eureka Planning Area*, EA NV063-EA02-16.

Implementation of the proposed action allows for the timely leasing and exploration of geothermal resources in the Shoshone-Eureka Planning Area, while providing adequate mitigation measures for the protection and conservation of resources.

## **FINDING OF NO SIGNIFICANT IMPACTS**

Based on the analysis in the EA, it was determined that impacts from the proposed action, with the associated mitigation measures, would not be significant. Therefore an Environmental Impact Statement will not be prepared.

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**Gail G. Givens**  
**Assistant Field Manager**  
Nonrenewable Resources Field Manager

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**Date:**

## **APPEALS**

### **Affected Parties**

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4 and enclosed Form 1842-1. If an appeal is taken, the notice of appeal must be filed in this office (Bureau of Land Management, Battle Mountain Field Office, 50 Bastian Road, Battle Mountain, NV 89820) within 30 days from the receipt of this decision. The appellant has the burden of showing that the decision appealed from is in error.

If the appellant wishes to file a petition pursuant to regulation 43 CFR 4.21 (58 FR 4939, January 19, 1993) or 43 CFR 2804.1 for a stay of the effectiveness of this decision during the time the appeal is being reviewed by the Board, the petition for a stay must accompany the notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed in this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

### **Standards for Obtaining a Stay**

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

- (1) The relative harm to the parties if the stay is granted or denied;
- (2) The likelihood of the appellant's success on the merits;
- (3) The likelihood of immediate and irreparable harm if the stay is not granted; and
- (4) Whether the public interest favors granting the stay.



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**INFORMATION ON TAKING APPEALS TO THE BOARD OF LAND APPEALS**

***DO NOT APPEAL UNLESS***

1. This decision is adverse to you,  
*AND*
2. You believe it is incorrect

***IF YOU APPEAL, THE FOLLOWING PROCEDURES MUST BE FOLLOWED***

1. NOTICE OF APPEAL . . . . . Within 30 days file a *Notice of Appeal* in the office which issued this decision (see 43 CFR Secs. 4.411 and 4.413). You may state your reasons for appealing, if you desire.
2. WHERE TO FILE  
NOTICE OF APPEAL . . . . . U.S. Department of the Interior  
Bureau of Land Management  
Battle Mountain Field Office  
50 Bastian Road  
Battle Mountain, NV 89820  
  
SOLICITOR  
ALSO COPY TO . . . . . U.S. Department of the Interior  
Office of the Field Solicitor  
6201 Federal Building  
125 S. State Street  
Salt Lake City, UT 84138\_1180
3. STATEMENT OF REASON . . . . . Within 30 days after filing the *Notice of Appeal*, file a complete statement of the reasons why you are appealing. This must be filed with the Interior Board of Land Appeals, Office of Hearings and Appeals, U.S. Department of the Interior, 801 North Quincy St., Suite 300, Arlington, Virginia 22203 (see 43 CFR 4.412 and 4.413). If you fully stated your reasons for appealing when filing the *Notice of Appeal*, no additional statement is necessary.  
  
SOLICITOR  
ALSO COPY TO . . . . . U.S. Department of the Interior  
Office of the Field Solicitor  
6201 Federal Building  
125 S. State Street  
Salt Lake City, UT 84138\_1180
4. ADVERSE PARTIES . . . . . Within 15 days after each document is filed, each adverse party named in the decision and the Regional Solicitor or Field Solicitor having jurisdiction over the State in which the appeal arose must be served with a copy of: (a) the *Notice of Appeal*, (b) the Statement of Reasons, and (c) any other documents files (see 43 CFR Sec. 4.413). Service will be made upon the Associate Solicitor, Division of Energy and Resources, Washington, D.C. 20240, instead of the Field or Regional Solicitor when appeals are taken from decisions of the Director (WO-100).
5. PROOF OF SERVICE . . . . . Within 15 days after any document is served on an adverse party, file proof of that service with the Interior Board of Land Appeals, Office of Hearings and Appeals, U.S. Department of the Interior, 801 North Quincy St., Suite 300, Arlington, Virginia 22203. This may consist of a certified or registered mail "Return Receipt Card" signed by the adverse party (see 43 CFR Sec. 4.401 (c) (2)).

*Unless these procedures are followed your appeal will be subject to dismissal (see 43 CFR Sec. 4.402). Be certain that all communications are identified by serial number of the case being appealed.*

NOTE. *A document is not filed until it is actually received in the proper office (see 43 CFR Sec. 4.401 (a)).*

## SUBPART 1821.2--OFFICE HOURS; TIME AND PLACE FOR FILING

Sec. 1821.2-1 *Office hours of State Offices.* (a) State Offices and the Washington Office of the Bureau of Land Management are open to the public for the filing of documents and inspection of records during the hours specified in this paragraph on Monday through Friday of each week, with the exception of those days where the office may be closed because of a national holiday or Presidential or other administrative order. The hours during which the State Office and the Washington Office are open to the public for the filing of documents and inspection of records are from 10 a.m. to 4 p.m., standard time or daylight savings time, whichever is in effect at the city in which each office is located.

Sec. 1821.2(d) Any documents required or permitted to be filed under the regulations of this chapter, which is received in the State Office or the Washington Office, either in the mail or by personal delivery when the office is not open to the public shall be deemed to be filed as of the day and hour the office next opens to the public.

(e) Any document required by law, regulations, or decision to be filed within a stated period, the last day of which falls on a day the State Office or the Washington Office is officially closed, shall be deemed to be timely filed if it is received in the appropriate office on the next day the office is open to the public.

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